

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

- 1. (previously presented):** A photocatalyst comprising a capsule structure which comprises a cadmium compound shell and a void and having an average particle diameter of 100 nm or less.
- 2. (original):** The photocatalyst according to claim 1, wherein the average particle diameter is 50 nm or less.
- 3. (original):** The photocatalyst according to claim 1, wherein the cadmium compound is cadmium sulfide.
- 4. (original):** The photocatalyst according to claim 1, characterized by supporting a Group 8 to 11 metal.
- 5. (original):** The photocatalyst according to claim 4, characterized in that the metal is platinum.
- 6. (original):** The photocatalyst according to claim 1, which has a pore extending from its surface to its interior.
- 7. (original):** The photocatalyst according to claim 6, which has a multiplicity of such pores.
- 8. (previously presented):** A process for producing a photocatalyst comprising a capsule structure which comprises a cadmium compound shell and a void, said process comprising dropping a solution of a cadmium salt into a solution of a sodium compound.

**9. (original):** The process for producing a photocatalyst according to claim 8, wherein the solution of a sodium compound contains sodium sulfite.

**10. (original):** The process for producing a photocatalyst according to claim 8, wherein the solution of a sodium compound contains sodium sulfide.

**11. (original):** The process for producing a photocatalyst according to claim 8, wherein the cadmium salt is cadmium nitrate.

**12. (currently amended):** A process for producing a photocatalyst comprising a capsule structure, which comprises a cadmium compound shell and a void and having an average particle diameter of 100 nm or less, said process comprising admixing a solution of a sodium compound in a suspension of particles of a cadmium compound.

**13. (original):** The process for producing a photocatalyst according to claim 12, wherein the cadmium compound is cadmium hydroxide.

**14. (original):** The process for producing a photocatalyst according to claim 12, wherein the cadmium compound is cadmium oxide.

**15. (original):** The process for producing a photocatalyst according to claim 12, wherein the suspension of particles of a cadmium compound is prepared by mixing a solution of cadmium nitrate with a solution containing sodium hydroxide.

**16. (original):** The process for producing a photocatalyst according to claim 15, wherein the solution containing sodium hydroxide contains a chloride.

**17. (original):** The process for producing a photocatalyst according to claim 16, wherein the chloride is sodium chloride.

**18. (original):** The process for producing a photocatalyst according to claim 12, wherein the sodium compound is sodium sulfide.

**19. (original):** The process for producing a photocatalyst according to claim 8 or 12, wherein photocatalyst particles as obtained are caused to support a Group 8 to 11 metal.

**20. (original):** The process for producing a photocatalyst according to claim 19, wherein the metal is platinum.

**21. (original):** The process for producing a photocatalyst according to claim 8 or 12, which further comprises suspending photocatalyst particles as obtained in a solution containing sodium sulfite and applying light thereto.

**22. (original):** The process for producing a photocatalyst according to claim 21, wherein the light is visible light.

**23. (original):** The process for producing a photocatalyst according to claim 21, wherein the light is solar or pseudo-solar light.